

HAZARDOUS MATERIALS SURVEYS

For

**NATIONAL OCEANIC & ATMOSPHERIC
ADMINISTRATION**

PRIBILOF FACILITIES

ST. GEORGE, ALASKA

- **WASH HOUSE ABOVE THE SEALING PLANT**
- **COTTAGE C**

FINAL REPORT

November 2003

Prepared by:


ENVIRONMENTAL &
INSTRUMENTATION
1611 East 1st Avenue
Anchorage, Alaska 99501



EXECUTIVE SUMMARY

Hazardous Material Surveys National Oceanic & Atmospheric Administration Sealing Plant and Cottage C Facilities St. George, Alaska

PSI Environmental and Instrumentation (PSI) was contracted by the National Oceanic & Atmospheric Administration (NOAA) to perform hazardous material surveys of several buildings on the Pribilof Islands of St. Paul and St. George, Alaska. This report summarizes the findings from surveys conducted at the St. George Seal Plant and Cottage C facilities.

PSI inspected the buildings for the presence, extent, and condition of possible asbestos-containing materials (ACM), lead-based paint, leachable lead in building debris, mercury-containing items, polychlorinated biphenyls (PCB) ballasts in light fixtures and items containing radioactive compounds. The purpose of these inspections were to identify hazardous materials that may be disturbed during future renovation or demolition activities.

Samples were collected during the survey to fulfill the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for future renovation or demolition work. Mick Neary of PSI, accompanied by Brian Morgan of EHS-Alaska, Inc. (EHS) performed an inspection and collected samples from building materials on March 23 and 24, 2003.

This report includes field and laboratory data sheets provided as Appendix A, building plans displaying sample locations as Appendix B, a summary cost estimate for the removal and disposal of identified hazardous wastes from each building as Appendix C, and a photo log (Appendix D) showing materials identified during each building survey.

The area surveyed at the Seal Plant was limited to the second floor of the facility, known as the wash house, that included living quarters and associated small storage area. Hazardous materials identified in the area surveyed at the Seal Plant Building were limited to the following:

- Non-friable asbestos containing white sink undercoating found at the stainless steel sink located in the upstairs room along the south wall;
- Lead paint determined from a sample collected at a painted surface at the doorway along the south wall;
- Soldered pipe joints may contain metallic lead depending on the age of the piping; and
- Due to their age, all fluorescent light fixtures were assumed to contain mercury.



Hazardous Materials identified at the Cottage C Building included the following:

- Non-friable asbestos containing pink sink undercoating found at the stainless steel sink located in the kitchen;
- A small amount of friable asbestos containing aircell insulation along the west wall of the west stairwell in the basement crawl space;
- Lead containing paint;
- Soldered pipe joints may contain metallic lead depending on the age of the piping;
- Twenty seven polychlorinated biphenyl (PCB) fluorescent light ballasts; and
- Approximately sixty fluorescent light fixtures and 2 thermostats were assumed to contain mercury.

Removal, disposal and demolition activities, as well as working with or around hazardous materials may require workers to follow specific state or federal procedures, safeguards, and/or monitoring to protect the health and safety of building inhabitants, workers and the environment.

The following report address, in more detail, the areas investigated during this survey, the locations of samples collected, instrumentation and analytical sample results, applicable photographs and regulatory constraints for the hazardous materials identified.

HAZARDOUS MATERIALS SURVEY

**For
NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION
PRIBILOF FACILITIES
ST. GEORGE, ALASKA**



SEAL PLANT BUILDING

**FINAL REPORT
November 2003**

Prepared by:

PSI
ENVIRONMENTAL &
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1611 East 1st Avenue
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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Materials
CFR	Code of Federal Regulations
EHS	EHS Alaska, Inc.
EPA	Environmental Protection Agency
IATL	International Asbestos Testing Laboratories
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NMFS	National Marine Fisheries Service
NOAA	National Oceanic & Atmospheric Administration
NRC	Nuclear Regulatory Commission
NVLAP	National Voluntary Laboratory Accredited Program
OSHA	Occupational Safety and Health Administration
PCB	Poly-chlorinated Biphenyls
PLM	Polarized Light Microscopy
PSI	PSI Environmental & Instrumentation
TCLP	Toxic Characteristics Leachate Procedure
TEM	Transmission Electron Microscopy
XRF	X-Ray Fluorescence

1.0 INTRODUCTION

PSI Environmental & Instrumentation (PSI) was contracted by the National Oceanic & Atmospheric Administration (NOAA) to perform hazardous material surveys of several buildings on St. Paul and St George Islands, Alaska. Buildings on St. George Island include National Marine Fisheries Service (NMFS) Cottage C and the NMFS Wash Plant above the Sealing Plant. This report summarizes the survey performed at The Wash plant above the Sealing Plant. The area sampled was limited to the second floor of the facility, the living quarters and associated small storage area. Samples were collected during the survey to fulfill the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for future renovation or demolition work. Mick Neary of PSI, accompanied by Brian Morgan of EHS-Alaska, Inc. (EHS) performed an inspection and collected samples from building materials on March 23, 2003.

The St. George Seal Plant is a single U-shaped building constructed for the processing of seals. The easternmost leg of the building has a second story that is the living area that was the subject of this survey. The surveyed portion of the building was renovated in 1999. This information was confirmed by the local contact and by record drawings.

2.0 SCOPE OF WORK

Personnel inspected the building for the presence, extent, and condition of possible asbestos-containing materials (ACM), lead-based paint, leachable lead in building debris, mercury-containing items, polychlorinated biphenyls (PCB) ballasts in light fixtures and items containing radioactive compounds. The purpose of the inspection was to identify hazardous materials that may be disturbed during future renovation or demolition activities. Field and laboratory data sheets are included as Appendix A, building plans displaying sample locations are presented in Appendix B. A summary cost estimate has been prepared for the removal and disposal of identified hazardous wastes from this building, and is included as Appendix C. Appendix D contains a photo log from the survey.

3.0 SAMPLING AND ANALYSIS

3.1 Asbestos-Containing Materials

Personnel performed an inspection of the project building and collected samples of materials suspected of containing asbestos from 18 locations. Mr. Morgan is a U.S. Environmental Protection Agency (EPA) certified building inspector. All samples were analyzed for the presence of asbestos by polarized light microscopy (PLM), the method of analysis recommended by the EPA to determine the composition of suspected asbestos-containing materials. International Asbestos Testing Laboratories (IATL), Mt. Laurel, New Jersey analyzed samples for asbestos content. IATL is a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA criteria. Table 1 provides a summary list of all samples collected with analytical results. Chain of Custody Record/Field Survey Data sheets and Laboratory reports are included in Appendix A. A floor plan showing locations of samples collected is provided in Appendix B.

TABLE 1: ASBESTOS SAMPLE SUMMARY
SAMPLES COLLECTED MARCH 23, 2003

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
SP323-A01	White sink undercoating	Room 2, S wall	5% Chrysotile
SP323-A02	Joint compound	Room 2, S wall	None Detected
SP323-A03	Gypsum wallboard	Room 1, center ceiling	None Detected
SP323-A04	12" x 12" beige floor tile with tan and grey streaks (FT-1)	Room 1, NW corner	None Detected
SP323-A05	Gypsum wallboard	Room 1, N wall	None Detected
SP323-A06	Gypsum wallboard	Room 3, E wall	None Detected
SP323-A07	Gypsum wallboard	Room 5, small wall N of shower	None Detected
SP323-A08	FT-1	Room 6, SE corner	None Detected
SP323-A09	Joint compound	Room 9, N doorway	None Detected
SP323-A10	Joint compound	Room 10, W wall	None Detected
SP323-A11	12" x 12" floor tile looks like 6" parquet squares (FT-2)	Room 11, doorway	None Detected
SP323-A12	Fiberglass facing paper	Attic space above room 12 doorway	None Detected
SP323-A13	Joint compound	Room 10, S of door	None Detected
SP323-A14	Gypsum wallboard	Room 1, N wall, E end	None Detected
SP323-A15	Asphalt roofing	Small roof above S entrance	None Detected
SP323-A16	Black Tarry roof membrane	Roof above room 13, S edge	None Detected
SP323-A17	FT-2	Room 11, NE corner	None Detected
SP323-A18	FT-1	Room 11, doorway	None Detected
The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).			

Sink Undercoating

The sprayed-on undercoating on the stainless steel sink in the kitchen was found to be asbestos containing. The material was in good condition and was considered non-friable.

3.2 Lead-Containing Materials

Lead Paint

Paint was tested for lead at 28 locations throughout the building. Paint was analyzed using a NITON XL309 X-Ray Fluorescence (XRF) lead paint analyzer (Serial # U862NR0666 with software version 5.3). The instrument was operated in the "K & L + Spectra" mode. Prior to testing an instrument self-calibration test was performed and the instrument calibration was checked using a set of government traceable lead paint samples. Calibration was checked using known paint film samples containing 0.0 mg/cm², 0.3 +/- 0.1 mg/cm², 1.0 +/- 0.1 mg/cm², 1.6 +/- 0.2 mg/cm², and 3.5 +/- 0.3 mg/cm² of lead. The instrument was calibrated and all calibration tests were successful. Calibration tests are indicated in the test results table with the word "calibration" in the room column. Sampling results are included in Appendix A. A drawing showing sample locations is included in Appendix B.

The EPA has determined that paints containing lead greater than 1 milligram per square centimeter (mg/cm²) are considered "lead based paints". A single painted surface was found to have paint with lead in excess of the 1.0 mg/cm² threshold.

Although there is no requirement to remove lead-based or lead-containing paints from this building, any loose or peeling paint should be removed to prevent potential lead dust exposure to construction personnel during demolition. Additionally, wherever torch cutting or welding are to take place, paint should be removed from the heat-affected area.

The U.S. Occupational Safety and Health Administration (OSHA) does not recognize a lower limit to the quantity of lead present in paint for their standard, 29 CFR 1926.62, to be in effect. However, lead in paint at the levels found can expose construction/demolition workers to lead levels in excess of the permissible exposure limits set by the OSHA standard if proper work controls and protective equipment are not used during renovation.

Solder on Piping and Tubing

Depending on the age of the piping and tubing, soldered joints typically contain metallic lead.

Settled and Concealed Dusts

Workers should be made aware that the potential exists for encountering dusts containing lead.

Leachable Lead

Personnel performed a survey of the building and collected a composite sample of representative materials for leachable lead analysis. Sampling was performed using the guidelines set forth in the United States Army Environmental Hygiene Agency's *Sampling Protocol – Building Demolition Debris and Buildings Painted with Lead-Based Paint*. This composite sample was analyzed for leachable lead content by means of Toxicity Characteristic Leaching Procedure (TCLP). The composite sample was analyzed by EMSL Analytical, Westmont, New Jersey. The result of this composite sample analysis shows a concentration of <0.4 mg/L of lead, well below the allowable 5 mg/L as established by the EPA. This result indicates that the waste stream of this building would be considered hazardous waste with respect to lead. The Chain of Custody Record/Field Survey Data sheets with results are included in Appendix A.

3.3 Polychlorinated Biphenyls (PCB)-Containing Materials

Fluorescent light fixtures were inspected at random for the presence of polychlorinated biphenyl (PCB) containing ballasts. Unless ballasts were specifically labeled "No PCBs", they were assumed to contain PCBs. No PCB-containing ballasts were identified in this portion of the building.

3.4 Mercury-Containing Materials

Fluorescent light fixtures were present throughout the project area. Due to their age, all fluorescent lamps were assumed to contain mercury. Prior to disposal, these should be analyzed for leachable mercury content by means of a TCLP procedure. This test will determine whether they are suitable for disposal in a landfill or whether they should be treated as hazardous waste when disposed of. There were approximately 65 of these bulbs in the facility.

4.0 REGULATORY CONSTRAINTS

4.1 Asbestos-Containing Materials

The EPA regulations issued as Title 40 of the Code of Federal Regulations, Part 61 (40 CFR 61) under the National Emission Standards for Hazardous Air Pollutants (NESHAP), established procedures for handling ACM during asbestos removal and waste disposal. These regulations require an owner (or the owner's contractor) to notify the EPA of asbestos removal operations and to establish responsibility for the removal, transportation, and disposal of asbestos. The disposal of asbestos waste is regulated by the EPA, the State of Alaska Department of Environmental Conservation, and the disposal site operator. OSHA regulation 29 CFR 1926.1101 requires air monitoring during ACM removal and during demolition to determine the airborne concentrations of asbestos to which workers may be exposed. 29 CFR 1926.1101 also establishes permissible exposure limits, respiratory protection and protective clothing requirements, and establishes standard work practices and engineering controls for asbestos

removal. All federal, state and local standards regulating asbestos should be followed during renovations of this building.

4.2 Lead-Containing Materials

Federal OSHA requirements (29 CFR 1926.62), and the Alaska Administrative Code (AAC) (8 AAC Chapter 61) have promulgated or adopted regulations that apply to all construction work where employees may be exposed to lead. Due to the presence of lead-containing paint in and on the surfaces to be renovated, the renovation contractor is required to monitor his/her workers to determine if they will be exposed to lead at or above the action level established in the regulation. Until this "initial determination" establishes that workers are not exposed above the permissible exposure limit, the contractor is required to provide worker and site protection procedures. Continued air and medical monitoring may be required if exposure is above the action level.

The EPA requires that actual construction or demolition debris that contains lead or lead-containing paint be tested using the TCLP procedure to determine if the waste must be treated as hazardous waste. In order to classify the lead wastes as hazardous or non-hazardous for disposal purposes, TCLP tests are required by the EPA. The TCLP test determines the leachability of lead from the paint and substrate. Currently, the allowable leachate of lead in order to be classified as a non-hazardous waste is 5 milligrams of lead per liter of leachate (mg/l) or less. Anything above this 5 mg/l level is classified as hazardous waste and must be disposed of in the "lower 48" at an approved permitted Transportation, Storage, Disposal facility. All federal, state and local standards regulating lead and lead-containing wastes should be followed during the demolition of this building.

4.3 PCB-Containing Materials

Products that contain PCBs at 50 ppm or greater are regulated by the EPA. The EPA has promulgated regulations (40 CFR Part 761) that cover the proper handling and disposal of PCB-containing materials. Workers who remove or handle PCB-containing or PCB-contaminated materials or who transport or dispose of PCB wastes must be trained and certified in hazardous waste operations and emergency response (HAZWOPER) as required by 29 CFR 1910.120 and the State of Alaska Department of Labor (8 AAC 61). The Department of Transportation under 49 CFR Parts 100-199 regulates the marking, packaging, handling and transportation of hazardous materials. All federal, state and local standards regulating PCBs should be followed during the demolition of this building.

4.4 Mercury-Containing Materials

Building waste materials containing mercury or mercury compounds are considered hazardous waste if the mercury levels, as determined by a TCLP test of the waste, exceed 0.2 milligrams per liter (0.2 mg/l). The EPA has promulgated regulations (40 CFR Parts 261, 262, and 263) that cover the proper characterization, handling, transportation and disposal of hazardous waste. Workers who remove or handle hazardous waste and transport or dispose of hazardous wastes must be trained and certified in HAZWOPER as required 29 CFR 1910.120 and the State of Alaska Department of Labor (8 AAC 61). The Department of Transportation under 49 CFR Parts 100-199 regulates the marking, packaging, handling and transportation of hazardous

materials. All federal, state and local standards regulating mercury should be followed during the renovation of this building.

APPENDIX A

Bulk Asbestos and TCLP Field Data Sheets, Laboratory Reports and XRF Data

APPENDIX B

Sketches of Sample Locations

APPENDIX C

Abatement Cost Summary

APPENDIX D

PHOTO LOG

APPENDIX A

Bulk Asbestos and TCLP Field Data Sheets, Laboratory Reports and XRF Data

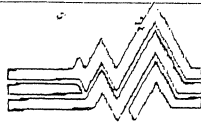
APR. 2. 2003 4:08PM IATL

**EHS** ALASKA
INCORPORATED**EHS-Alaska, Inc.**10928 Eagle River Road, Suite 202, Eagle River, AK 99577-8052
(907) 694-1383 • (907) 694-1382 faxe-mail • ehsak@ehs-alaska.com

NO. 795-6.50 P. 8

CHAIN OF CUSTODY RECORD/FIELD SURVEY DATA			Page 1 of 2
FIELD COLLECTION DATE: 3-23-03	JOB #: 5766-02	MATERIAL TYPE: (Circle) ASBESTOS	TOTAL QUANTITIES: 18
PROJECT NAME: NOAA - St George Seal Plant	BULK ANALYSIS REQUESTED:	<input checked="" type="checkbox"/> PLM <input type="checkbox"/> PLM DUST <input type="checkbox"/> TEM BULK <input type="checkbox"/> LEAD TCLP <input type="checkbox"/> LEAD PPM	
FACILITY: NOAA - St George Seal Plant	DISPOSAL: Normal	TURNAROUND: 5 Day	
SPECIAL INSTRUCTIONS:			
COLLECTED BY (signature) Brian Morgan PRINTED NAME T-7577-8 CERT# AHERA# FedEx 3/25/03 SHIPPING METHOD 791332037608 COURIER (signature)		IATL SELECTED LABORATORY SAMPLES ACCEPTED BY DATE/TIME 4/2/03 ANALYST'S SIGNATURE DATE	
COMMENTS: Note: room numbers were assigned by the inspector. See sample location drawing for exact sample locations <div style="text-align: center; margin-top: 20px;">MAR 26 2003</div>			
SAMPLE ID	SAMPLE DESCRIPTION (COLOR, MATERIAL TYPE, LAYERS, PRIORITIVITY)	LOCATION/COMMENTS (INCLUDING PHOTO/REF)	RESULTS
SP323-A01 1685686	White sink undercoating	Room 2, S wall	S90 c
SP323-A02 1685687	Joint compound	Room 2, S wall	ND
SP323-A03 1685688	Gypsum wallboard	Room 1, center ceiling	ND
SP323-A04 1685689	12" x 12" beige floor tile with tan and grey streaks (FT-1)	Room 1, NW corner	ND
SP323-A05 1685690	Gypsum wallboard	Room 1, N wall	ND
SP323-A06 1685691	Gypsum wallboard	Room 3, E wall	ND
SP323-A07 1685692	Gypsum wallboard	Room 5, small wall N of shower	ND
SP323-A08 1685693	FT-1	Room 6, SE corner	ND
SP323-A09 1685694	Joint compound	Room 9, N doorway	ND
SP323-A10 1685695	Joint compound	Room 10, W wall	ND
SP323-A11 1685696	12" x 12" floor tile looks like 6" parquet squares (FT-2)	Room 11, doorway	ND

**RETURN A SIGNED COPY OF THIS FORM WITH THE FINAL REPORT TO EHS-ALASKA **HS-991



EHS ALASKA INCORPORATED

Environmental Health Sciences-Alaska, Inc.

10928 Eagle River Road, Suite 202, Eagle River, AK 99577-8052
(907) 694-1383 • (907) 694-1382 fax

FIELD SURVEY DATA (continued)

Page 2 of 2

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IATL International Asbestos
Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054

Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 04/02/2003
Project: NOAA-St. George Seal Plant, 3-23-03
Project No.: 5766-02

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1685686	Material Description:	Tan Fibrous	
Client No.:	SP323-A01	Location:	Sink Undervaulting	Room 2; S.Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
PC 5.0	Chrysotile	None Detected	None Detected	95

Lab No.	1685687	Material Description:	Tan/White Lt. Compound	
Client No.:	SP323-A02	Location:		Room 2; S.Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.	1685688	Material Description:	White Sheetrock	
Client No.:	SP323-A03	Location:	Room 1	Center Ceiling
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	1	Fibrous Glass	99
		Trace	Cellulose	

Lab No.	1685689	Material Description:	Tan Floor Tile	
Client No.:	SP323-A04	Location:	Clear Mastic, 12x12	Room 1; N.W. Corner
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 1165

NY-DOH No. 11021

AIHA Lab No. 444

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Simplified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: _____

Approved By: _____

Date: _____

 Frank B. Ehrenfeld, III
Laboratory Director

IATL International Asbestos
Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054

Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 04/02/2003
Project: NOAA-St. George Seal Plant, 3-23-03
Project No.: 5766-02

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 1685689	Material Description: Tan Floor Tile	
Client No.: SP323-A04	Location: Clear Mastio, 12x12 Room 1; N.W. Corner	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>
None Detected	None Detected	None Detected
		<u>% Non-Fibrous Material</u>
		100
Mastio From Above		

Lab No. 1685690	Material Description: White Joint Compound	
Client No.: SP323-A05	Location: Room 1; N.Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>
None Detected	None Detected	None Detected
		<u>% Non-Fibrous Material</u>
		100

Lab No. 1685691	Material Description: White Sheetrock	
Client No.: SP323-A06	Location: Room 3; E.Wall	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>
None Detected	None Detected	1
		<u>% Non-Fibrous Material</u>
		99
No Joint Compound	Trace	Fibrous Glass
		Cellulose

Lab No. 1685692	Material Description: White Joint Compound	
Client No.: SP323-A07	Location: Room 5; Small Wall N. Of Shower	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>
None Detected	None Detected	None Detected
		<u>% Non-Fibrous Material</u>
		100

NIST-NVLAP No. 1165

NY-DOH No. 11021

AIHA Lab No. 444

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: _____

Approved By: _____

Date: _____

 Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos
Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054

Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577**Report Date:** 04/02/2003
Project: NOAA-St George Seal Plant, 3-23-03
Project No.: 5766-02

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1685693	Material Description:	Tan Floor Tile	
Client No.:	SP323-A08	Location:	Clear Mastic	Room 6; S.E. Corner
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.	1685693	Material Description:	Tan Floor Tile	
Client No.:	SP323-A08	Location:	Clear Mastic	Room 6; S.E. Corner
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Mastic Not Analyzed

Lab No.	1685694	Material Description:	White Joint Compound	
Client No.:	SP323-A09	Location:		Room 9; N. Doorway
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

Lab No.	1685695	Material Description:	Tan Joint Compound	
Client No.:	SP323-A10	Location:		Room 10; W. Wall
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444***This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.*

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless noted. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: _____**Approved By:** _____**Date:** _____Frank E. Ehrenfeld, III
Laboratory Director

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Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054

Telephone 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS**Client:** EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577**Report Date:** 04/02/2003
Project: NOAA-St. George Seal Plant, 3-23-03
Project No.: 5766-02**BULK SAMPLE ANALYSIS SUMMARY**

Lab No.	1685696	Material Description:	Tan/Floor Tile, 12x12		
Client No.:	SP323-A11	Location:	Tan/Black Tar Paper Room 11; Doorway		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1685696	Material Description:	Tan/Floor Tile, 12x12		
Client No.:	SP323-A11	Location:	Tan/Black Tar Paper Room 11; Doorway		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Mastic From Above

Lab No.	1685697	Material Description:	Tan/Black Tar Paper		
Client No.:	SP323-A12	Location:	Attic Space Above Room 12 Doorway		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	85	Cellulose	15	

Lab No.	1685698	Material Description:	White Joint Compound		
Client No.:	SP323-A13	Location:	Room 10; S. Of Door		
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444***This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.*

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: _____

Approved By: _____

Date: _____

Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos
Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 08054

Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS**Client:** EHS Alaska Incorporated

10928 Eagle River Rd., Ste 202

Eagle River AK 99577

Report Date: 04/02/2003**Project:** NOAA-St. George Seal Plant, 3-23-03**Project No.:** 5766-02**BULK SAMPLE ANALYSIS SUMMARY**

Lab No.	1685699	Material Description:	White Sheetrock		
Client No.:	SP323-A14	Location:	Room 1	N.Wall; E.End	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	Trace	Fibrous Glass	100	
No Joint Compound		Trace	Cellulose		

Lab No.	1685700	Material Description:	Brown/Black Shingle		
Client No.:	SP323-A15	Location:	Small Roof	Above S. Entrance	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	15	Fibrous Glass	85	

Lab No.	1685701	Material Description:	Black		
Client No.:	SP323-A16	Location:	Rubber/Roof Material	Roof Above Room 13; S.	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1685702	Material Description:	Tan Floor Tile		
Client No.:	SP323-A17	Location:	Clear Mastic	Room 11; N.E. Corner	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444***This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.*

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: _____**Approved By:** _____**Date:** _____Frank E. Ehrenfeld, III
Laboratory Director

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16000 Horizon Way Unit 100 Mt Laurel, NJ 08054

Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577**Report Date:** 04/02/2003
Project: NOAA-St. George Seal Plant, 3-23-03
Project No.: 5766-02

BULK SAMPLE ANALYSIS SUMMARY

Lab No.	1685702	Material Description:	Tan Floor Tile		
Client No.:	SP323-A17	Location:	Clear Mastie	Room 11; N.E. Corner	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	
Mastic From Above					

Lab No.	1685703	Material Description:	Tan Floor Tile		
Client No.:	SP323-A18	Location:	Clear Mastie	Room 11; Doorway	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	

Lab No.	1685703	Material Description:	Tan Floor Tile		
Client No.:	SP323-A18	Location:	Clear Mastie	Room 11; Doorway	
<u>% Asbestos</u>	<u>Type</u>	<u>% Non-Asbestos Fibrous Material</u>	<u>Type</u>	<u>% Non-Fibrous Material</u>	
None Detected	None Detected	None Detected	None Detected	100	
Mastic From Above					

NIST-NVLAP No. 1165**NY-DOH No. 11021****AIHA Lab No. 444***This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP or any agency of the U.S. government.*

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicator Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: _____

Approved By: _____

Date: _____

Frank E. Ehrenfeld, III
Laboratory Director



EHS-Alaska, Inc.

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[illegible]

EMSL Analytical

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Phone: (656) 858-4800 Fax: (656) 858-9551 Email: gmiller1@emsl.com

EMSL

Attn: Brian L. Morgan
Environmental Health Sciences-Alaska,
10928 Eagle River Road
Suite 202
Eagle River, AK 99577-8052

Customer ID: ENV104
Customer PO:
Received: 03/26/03 11:20 AM

Fax: (907) 694-1382 Phone: 907-694-1383
Project: NOAA Probiolofs Survey / Seal Plant / Job# 5766-02

EMSL Order: 200302744
EMSL Project ID:

Toxicity Characteristic Leaching Procedure (SW846, 1311/7420)

Client Sample Description	Lab ID	Analyzed	Lead Concentration
Seal plant- lclp1	0001		<0.4 mg/L

Gerold J. Miller, Ph.D.
Laboratory Director
NJ-NELAP: 04653
AIHA: 100184
or other approved signatory

Date Printed: 4/3/03 9:28:09 AM

THIS IS THE LAST PAGE OF THE REPORT.

Page 1 of 1

Lead Paint Screening Seal Plant

No	Site	Inspector	Room	Structure	Substrate	Feature	Condition	Color	Ssec	Date/Time	Depth Index	Results LBP	Results mg/cm ²
1	Seal Plant	Morgan	Shutter Cal	1					73	3/23/03 18:12	0 ...	NA	NA
2	Seal Plant	Morgan	Calibrate						3.2	3/23/03 18:15	1 NEG	0	0
3	Seal Plant	Morgan	Calibrate						3.1	3/23/03 18:15	1 NEG	0.31	0.31
4	Seal Plant	Morgan	Calibrate						22.4	3/23/03 18:15	1 POS	1	1
5	Seal Plant	Morgan	Calibrate						9.4	3/23/03 18:16	1.1 POS	1.76	1.76
6	Seal Plant	Morgan	Calibrate						7	3/23/03 18:17	1.1 POS	3.48	3.48
7	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	5.6	3/23/03 18:17	1 NEG	0	0
8	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	8	3/23/03 18:18	1 NEG	0	0
9	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	5.6	3/23/03 18:18	1 NEG	0	0
10	Seal Plant	Morgan	Room	Ceiling	Wood		Intact	White	3.2	3/23/03 18:19	1 NEG	0	0
11	Seal Plant	Morgan	Room	Ceiling	Wood		Intact	White	3.2	3/23/03 18:19	1 NEG	0	0
12	Seal Plant	Morgan	Room	Ceiling	Wood		Intact	White	3.1	3/23/03 18:19	1 NEG	0	0
13	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	10.3	3/23/03 18:20	1 NEG	0	0
14	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	12.6	3/23/03 18:20	1 NEG	0	0
15	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	8	3/23/03 18:21	1 NEG	0	0
16	Seal Plant	Morgan	Room	Ceiling	Wood		Intact	White	3.2	3/23/03 18:22	1 NEG	0	0
17	Seal Plant	Morgan	Room	Ceiling	Wood		Intact	White	3.1	3/23/03 18:22	1 NEG	0	0
18	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	8	3/23/03 18:22	1 NEG	0	0
19	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	5.6	3/23/03 18:23	1 NEG	0	0
20	Seal Plant	Morgan	Room	Ceiling	Wood		Intact	White	3.2	3/23/03 18:23	1 NEG	0	0
21	Seal Plant	Morgan	Room	Ceiling	Wood		Intact	White	3.2	3/23/03 18:23	1 NEG	0	0
22	Seal Plant	Morgan	Room	Door	Wood	Door	Intact	Brown	3.2	3/23/03 18:24	1 NEG	0	0
23	Seal Plant	Morgan	Room	Door	Wood	Casing	Intact	Brown	3.2	3/23/03 18:24	1.1 NEG	0.01	0.01
24	Seal Plant	Morgan	Room	Wall	Drywall		Intact	White	5.6	3/23/03 18:24	1 NEG	0	0
25	Seal Plant	Morgan	Room	Wall	Wood		Intact	Brown	3.2	3/23/03 18:25	1 NEG	0	0
26	Seal Plant	Morgan	Room	Wall	Wood		Intact	Brown	3.2	3/23/03 18:25	3.5 NEG	0.05	0.05
27	Seal Plant	Morgan	Room	Ceiling	Wood		Intact	White	3.2	3/23/03 18:26	1.1 NEG	0.01	0.01
28	Seal Plant	Morgan	Room	Door	Wood	Door	Intact	White	4.9	3/23/03 18:27	2.5 POS	8.02	8.02
29	Seal Plant	Morgan	Room	Wall	Wood		Intact	White	3.2	3/23/03 18:27	2.2 NEG	0.05	0.05
30	Seal Plant	Morgan	Room	Window	Wood	Apron	Intact	White	3.2	3/23/03 18:28	1 NEG	0	0
31	Seal Plant	Morgan	Room	Wall	Wood		Intact	White	3.2	3/23/03 18:29	1 NEG	0	0
32	Seal Plant	Morgan	Room	Window	Wood	Apron	Intact	White	3.2	3/23/03 18:29	1 NEG	0	0
33	Seal Plant	Morgan	Outside	Ext Wall	Wood	Trim Lwr	Intact	White	7.7	3/23/03 18:33	1.8 NEG	0.4	0.4
34	Seal Plant	Morgan	Outside	Wall	Wood		Intact	White	3.3	3/23/03 18:34	1.2 NEG	0.01	0.01
35	Seal Plant	Morgan	Calibrate						3.2	3/23/03 18:36	1 NEG	0	0
36	Seal Plant	Morgan	Calibrate						20.3	3/23/03 18:36	1 POS	1.04	1.04
37	Seal Plant	Morgan	Calibrate						9.3	3/23/03 18:37	1 POS	1.59	1.59

No	Site	Inspector	Room	Structure	Substrate	Feature	Condition	Color	Ssec	Date/Time	Depth Index	Results	
												LBP	mg/cm ²

Table Heading Descriptions:

- Ssec:

This is the nominal time in seconds that each sample was analyzed.
- Depth Index:

Indicates the relative depth of the lead. A Depth Index (DI) of less than 1.5 indicates lead very near the surface layer of paint. A DI between 1.5 and 4.0 indicates moderately covered lead. A DI greater than 4.0 indicates the lead paint is deeply buried beneath multiple layers of paint.
- LBP:

Results are shown as positive (POS ≥ 1.0 mg/cm²), inconclusive (INC) or negative (NEG < 1.0 mg/cm²). The results are based on the combined results of the K and L shell readings. L shell and K shell readings are not provided. Positive results are also in bold print.
- mg/cm²:

This is the testing results produced by the NITON XL-309 instrument in milligrams of lead per square centimeter (mg/cm²). The EPA defines lead based paint as paint containing lead at 1.0 mg/cm² or greater. A negative number is a result of an internal computation made by the instrument and should be interpreted as zero. Even though paint may be termed negative (less than 1.0 mg/cm) by EPA definition, disturbance of the paint may still be regulated by OSHA under 29 CFR 1926.62. Where lead is present at any level, appropriate engineering controls, work practices and personal protective equipment should be used until a negative exposure assessment can be determined.
- VOID:

This indicates that the test was intentionally terminated by the operator due to operator error (e.g. - operator moved analyzer while testing).

APPENDIX C

WORK PRACTICES AND PROCEDURES FOR ASBESTOS-CONTAINING MATERIALS

APPENDIX C

WORK PRACTICES AND PROCEDURES FOR ASBESTOS-CONTAINING MATERIALS

C.1.0 GENERAL

The O&M work practices detailed in this appendix are to provide guidance to NOAA maintenance and custodial personnel for conducting custodial, maintenance, and repair work in accordance with an established asbestos O&M program and applicable regulations. It should be noted that NOAA personnel are to perform only Class III and Class IV asbestos work. The work practices in this manual are designed to minimize the disturbance of ACM and to clean up and contain materials, debris, and contamination resulting from ACM disturbances.

As a part of the O&M program, a designated Safety Officer will review building inspection information to determine whether or not a suspect material contains asbestos. If a suspect material which is to be disturbed has not been sampled, it should either be sampled and analyzed by an accredited laboratory, or be assumed to contain asbestos and treated accordingly.

The work practices in this manual are generally designed to address one material at a time. If more than one type of material is involved, work practices should be selected and used in the order in which the materials will be encountered during the work. If two (2) or more materials must be addressed at one time, O&M personnel in conjunction with the Safety Officer shall develop a combined work practice to address the particular work situation.

When developing a combined work practice, the Safety Officer shall implement the most precautionary level of work practices.

The Safety Officer shall conduct an Initial Exposure Assessment immediately before or at the initiation of any Class III or IV asbestos work to determine exposure air monitoring requirements for employees. The Safety Officer will arrange for the necessary personnel and equipment needed if air monitoring is required.

C 2.0 PROHIBITIONS

The following work practices and engineering controls shall **NOT** be used for work that disturbs ACM.

- Power tools that are not equipped with point-of-cut ventilator or enclosures with HEPA-filtered exhaust air.
- Compressed air to remove asbestos or asbestos debris.
- Dry sweeping, shoveling, or other dry clean up of dust and debris containing ACM.
- Vacuum cleaners not equipped with HEPA filters.
- Employee rotation as a means of reducing employee exposure to asbestos.

C 3.0 MANDATORY PRACTICES

As a minimum, the following engineering controls and work practices shall be used for all repairs or maintenance activities that disturb asbestos-containing materials regardless of the level of exposure:

- Vacuum cleaners equipped with HEPA filters to collect asbestos debris and dust.
- Wet methods to control asbestos fiber release during asbestos handling, removal, cutting, application, and clean up. The Safety Officer shall approve of alternate methods to be used for each case where the use of wet methods is not feasible due to electrical hazards, equipment malfunction, and, in roofing, slipping hazards.
- Prompt cleanup and disposal of wastes and debris contaminated with asbestos in leak-tight containers.

C 4.0 PROCEDURES FOR FIBER RELEASE EPISODES

A fiber release episode is any uncontrolled or unintentional disturbance of ACM resulting in visible emissions of asbestos-containing materials. Fiber release episodes may occur as a result of equipment failure (pipe rupture, roof leak), fire, earthquake, or carelessness. Fiber release episodes may also occur during maintenance or repair projects. The following procedures shall be followed for all known or suspected fiber release episodes:

- Notification to the Safety Officer who will assign a trained in-house team to clean up debris and make repairs as soon as possible.
- Isolation of the spill area and posting of signs to prevent unauthorized personnel from entering. (Fire exit corridors must remain in operation).
- Shutdown of the air-handling system to prevent the distribution of asbestos fibers from the work site to other areas of the building.
- Clean up of the asbestos debris from the fiber release episode and documentation of all response activities.

C 5.0 GENERAL WORK PRACTICES AND ENGINEERING CONTROLS FOR CLASS III AND CLASS IV ASBESTOS WORK

Class III (maintenance and repair) asbestos work shall be conducted using engineering controls and work practices that minimize the exposure to employees performing the asbestos work and to bystander employees. Employees performing Class III jobs involving the disturbance of ACM shall wear respirators which are selected, used, and fitted pursuant to provisions of 29 CFR 1926.1101.

Class IV asbestos work (janitorial and maintenance clean up) shall be conducted by employees who have completed a NOAA asbestos awareness training program. All Class IV work shall be conducted using wet methods, HEPA vacuums, and prompt clean up of debris containing ACM.

C 5.1 Floor Tile Removal Procedure

It should be assumed that all old floor tile and mastic are asbestos-containing unless analysis of the materials indicates otherwise. Personnel shall use the following steps for removal of small amounts of asbestos-containing floor tile or mastics when required for maintenance or repair only. Respirators and protective clothing shall be used for this type work. Large-scale (more than 10 square feet) removal of asbestos-containing floor tile shall not be performed by NOAA employees.

- Prepare the work area. Post asbestos warning signs and barrier tape, shut off electrical and HVAC systems, notify employees in area of planned work, etc.
- Wet down the area with a generous amount of water.
- Keep wet for a period of time to loosen tiles if necessary.
- Lift tiles and dispose in a properly labeled container as asbestos waste.
- Water-based mastics can be removed by soaking with water. Solvent-based mastics may require special solvents to remove. Do not use solvents that are flammable or contain halogenated hydrocarbons. Do not grind or sand mastics. Remove sufficient mastic to provide a smooth surface for applying replacement tile.
- Clean all surfaces in adjacent areas by HEPA vacuuming or by wiping down using wet methods.
- Place contaminated rags, disposable tools, HEPA vacuum contents, disposal clothes, etc. in a 6-mil plastic disposal bag. Clean outside of bag and dispose of as asbestos waste in accordance with Section C 7.0, Temporary Storage and Disposal.
- Decontaminate clothing and equipment in accordance with Section C 6.0, Decontamination Procedures

C 5.2 Non-friable Asbestos-Containing Material Removal Procedures

C 5.2.1 Cutting or Drilling Vinyl Asbestos Floor Tile, Cement Asbestos Shingles, or Gypsum Board with Asbestos-Containing Joint Compound

It should be assumed that all cement board, vinyl flooring, and gypsum wallboard/joint compound systems are asbestos-containing unless laboratory analysis of the materials indicates otherwise. Respirators and protective clothing shall be used for this type of work. Use the following procedures when cutting or drilling through these materials.

- Prepare the work area. Post asbestos warning signs and barrier tape, shut off electrical and HVAC systems, notify employees in area of planned work, place 6-mil plastic sheeting, etc.
- For the drilling of small holes, apply shaving cream or similar type foam to area where hole is to be drilled or cut. For large holes mist continuously with amended water during drilling or cutting operation. The use of an airless sprayer is recommended.
- Drill or cut hole in center of foam. Use misting water method in addition if foam does not contain cut materials.

- When complete, wet clean the area around the cut and encapsulate the surfaces that were cut. Thoroughly clean non-disposable tools such as the drill and bits. HEPA vacuum any remaining dust or debris.
- Place contaminated rags, disposable tools, HEPA vacuum contents, disposal clothes, etc. in a 6-mil plastic bag. Clean outside of bag and dispose of as asbestos waste in accordance with Section C 7.0, Temporary Storage and Disposal.
- Decontaminate clothing and equipment in accordance with Section C 6.0, Decontamination Procedures.

C 5.2.2 Removal of Vinyl Asbestos Floor Tile, Cement Asbestos Shingles, or Gypsum Board with Asbestos-Containing Joint Compound

Joint compounds used with gypsum board often contain asbestos in low quantities. NOAA employees may remove small quantities (up to 10 square feet) of gypsum board with asbestos-containing joint compound as necessary only for repairs or maintenance activities. Respirators and protective clothing shall be used for this type of work. Use the following procedures when removing materials with asbestos-containing joint compound:

- Prepare the work area. Post asbestos warning signs, barrier tape, shut off electrical and HVAC systems, notify employees in area of planned work, etc.
- Cover the floor and other horizontal surfaces with 6-mil plastic before beginning. Seal off doors with 6-mil plastic to prevent dust from being carried into other areas. Shutdown ventilation equipment, and seal off all vents in the work area.
- Score the gypsum board to be removed with a sharp knife or cut manually with a gypsum board saw. Do not use power tools to cut the gypsum board. During sawing, another worker shall mist the area with water to control dust from the saw. Use of a HEPA vacuum is also recommended to capture dust.
- Remove the gypsum board in as large pieces as possible and place material in 6-mil plastic bags or wrap and seal in 6-mil plastic.
- Repair gypsum board as required using repair procedures described in the following section.
- HEPA vacuum all dust and debris from work area, and wet wipe all remaining dust from plastic and work area surfaces. Thoroughly vacuum and wet wipe non-disposable tools.
- Place contaminated rags, disposable tools, HEPA vacuum contents, disposal clothes, etc. in a 6-mil plastic bag. Clean outside of bag and dispose of as asbestos waste in accordance with Section C 7.0, Temporary Storage and Disposal.
- Decontaminate clothing and equipment in accordance with Section C 6.0, Decontamination Procedures.

C 5.2.3 Repair of Vinyl Asbestos Floor Tile, Cement Asbestos Shingles, or Gypsum Board with Asbestos-Containing Joint Compound

- HEPA vacuum damaged area of all loose debris.
- Fill with compatible non-asbestos filler such as joint compound.
- Let dry and use wet sponge technique to blend into adjacent surfaces. Do not sand.
- Finish to match adjacent surfaces.
- Dispose of any debris as asbestos waste in accordance with Section C 7.0, Temporary Storage and Disposal.
- Decontaminate clothing and equipment in accordance with C 6.0, Decontamination Procedures.

C 6.0 DECONTAMINATION PROCEDURES

The following personnel decontamination procedures will be followed for all asbestos work performed by NOAA employees.

- Establish an area next to the regulated area where decontamination of employees and equipment can take place.
- Place a 6-mil piece of poly (6' x 6' minimum) on the floor to catch any dust during decontamination.
- Clean outer suit with damp rags or a HEPA vacuum. Have another employee vacuum or wipe your back. Wipe off respirator with clean wet rag while still wearing it. Place contaminated rag in 6-mil poly disposal bag.
- Remove outer suit carefully, rolling it inside out and placing it in disposal bag. If wearing two suits, repeat above steps.
- Roll up the poly on the floor and place in disposal bag along with contaminated rags and suits. Remove respirator and place filters in disposal bag
- Remove air from bag with HEPA vacuum, twist shut, fold and duct tape to prevent the bag from leaking. Place taped bag into a labeled 6-mil disposal bag and seal in same manner. Dispose of in accordance with Section C 7.0, Temporary Storage and Disposal.
- Wash hands, face, and respirator thoroughly.

C 7.0 TEMPORARY STORAGE AND DISPOSAL

All debris and waste generated during ACM activities shall be disposed of in accordance with the following:

- ACM or asbestos-contaminated waste shall be placed in a labeled 6-mil poly bag and sealed with duct tape. The bag shall be double bagged in a second labeled 6-mil poly bag and sealed with duct tape.

- All asbestos material shall be saturated with water inside the inner 6-mil poly bag prior to sealing. This will limit fiber release if the bag is broken during transportation or disposal.
- Temporary storage of asbestos waste shall be in an area with limited access by employees and shall be marked with signs and barrier tape. All asbestos waste temporarily stored shall be in properly marked and labeled 6-mil plastic bags.
- Asbestos waste manifests shall be completed prior to transporting asbestos to a permitted landfill. The Environmental Engineer shall ensure a copy of the manifest is received and one copy maintained on file.
- Asbestos waste shall be transported in an enclosed or covered vehicle to a permitted landfill. Prior arrangements shall be made with the landfill for acceptance procedures and restrictions.

APPENDIX D

REINSPECTION OF ACM

NOAA SEALING PLANT WASH HOUSE ASBESTOS REINSPECTION REPORT

All ACM in the facilities should be scheduled for an inspection of damage or deterioration every year. Records of these inspections and any sampling results should be kept on file in the Appendices of this O&M Plan. The following form is provided as an example and may be used to record inspections. An EPA-Accredited Inspector should make these inspections.

NAME OF INSPECTOR: _____ PHONE #: _____

ORGANIZATION: _____

ADDRESS: _____ CITY, STATE, ZIP: _____

INSPECTOR COURSE AND DATE OF ACCREDITATION: _____

BUILDING INSPECTED: _____ DATE: _____

List all known or assumed ACM and note its location and condition. Indicate if ACM has been removed since last inspection.

ACM	LOCATION	CONDITION

NEXT INSPECTION DUE DATE: _____

**NOAA SEALING PLANT WASH HOUSE
ASBESTOS REINSPECTION REPORT
CONTINUED**

The following lists the materials that tested positive for asbestos in the Sealing Plant Wash House. Care should be taken when using this data as an indication of the location of asbestos-containing materials in the facility. Asbestos-containing materials may exist in locations other than shown in the list below. For example: The same vinyl floor tile found in several rooms may have been sampled in only one room. If one sample tested positive for asbestos, all similar floor tile is also assumed to be positive. It is best to refer to section 5.2, Sealing Plant Wash House ACM Summary and the Floor Plans (Appendix A) for locations of ACM during periodic reinspections.

Sealing Plant Wash House

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
SP323-A01	<i>White sink undercoating</i>	Room 2, S wall	5% Chrysotile

APPENDIX E

RESPIRATOR REQUIREMENTS

RESPIRATOR REQUIREMENTS

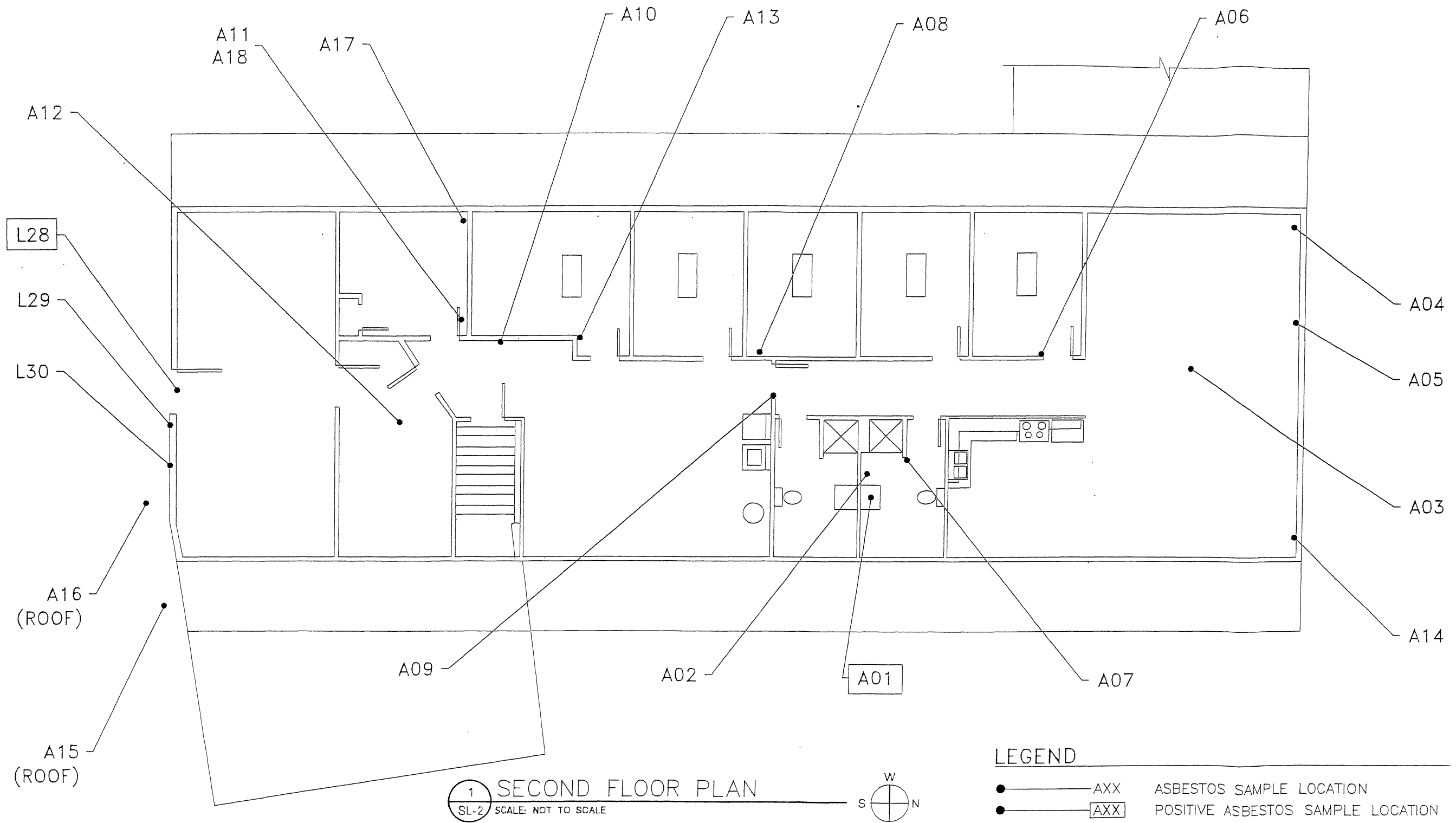
Respirators shall be worn by all NOAA employees performing Class III asbestos work, for all Class IV asbestos work in regulated areas, and for the clean up of asbestos debris or dust. Respirators shall be worn at all times when the exposure is above the PEL regardless of work class. Respirator type required is dependent on the airborne concentrations of asbestos in the work area. Table 1 specifies the proper respirator to be used. NOAA employees required to wear respirators shall be familiar with respirators and shall be properly trained in their use.

Respiratory Protection For Asbestos Fibers

Airborne Concentration of Asbestos or Conditions of Use:	Required Respirator
Not in excess of 1 f/cc (10 x PEL) or otherwise as required independent of exposure pursuant to 29 CFR 1926.1101 (h)(2)(iv).	Half -mask air purifying respirator other than a disposable respirator, equipped with high efficiency filters.
Not in excess of 5 f/cc (50 x PEL)	Full facepiece air-purifying respirator equipped with high efficiency filters.
Not in excess of 10 f/cc (100 x PEL)	Any powered air-purifying respirator equipped with high efficiency filters or any supplied air respirator operated in continuous flow mode.
Not in excess of 100 f/cc (1000 x PEL)	Full facepiece supplied air respirator operated in pressure demand mode.
Greater than 100 f/cc (1000 x PEL) or unknown concentration	Full facepiece supplied air respirator operated in pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

APPENDIX B

Sketches of Sample Locations



**PRIBILOF ISLAND - ST. GEORGE
 SEAL PLANT - 2ND FLOOR
 SAMPLE LOCATIONS
 SURVEY DATE 03/23/03**

PROJECT NO.
5766-02

DESIGNED:

DRAWN:
FCW

CHECKED:
BLM

SCALE:
NTS

DWG. TITLE:
5766-02-SL1

JOB No.
5766

DATE:
03/23/03

SL-2

HAZARDOUS MATERIALS REMOVAL COST ESTIMATE

PROJECT: SEAL PLANT
 LOCATION: St George Island, Alaska
 ESTIMATED BY: Brian Morgan

PROJECT NO: 5766
 CLIENT: NOAA
 DATE: 04/04/03

BASIC QUANTITY COSTS:

MATERIAL:	QTY UNIT	UNIT COST	TOTAL COST
SINK UNDERCOATINGS	1 SF @	\$100.00	\$100

OTHER HAZARDOUS MATERIALS (SEE ATTACHED)	1 LOT	\$163.00	\$163
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TOTAL QUANTITY COSTS:			\$263
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BASIC TASK COSTS:

PROJECT DESIGNER FEE:	0 EA @	\$500	\$0
MOBILIZATION / DEMOB MEALS: CRJ	0 EA @	\$100	\$0
MEALS	1.00 DAYS @	\$110	\$110
TRAVEL TO SITE:	0 EA @	\$900	\$0
LABOR COSTS DURING TRAVEL	0 EA @	\$640	\$0
SHIPPING OF SUPPLIES	1 LOT @	\$200	\$200
AIR MONITORING:	0.00 DAYS @	\$425	\$0

TOTAL TASK COSTS:			\$310
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TOTAL BASIC COSTS:	(QUANTITY & TASK)	\$573
LOCATION ADJUSTMENT:	INDEX = 1.10	\$630
CONTINGENCY:	PERCENT = 5	\$32
TOTAL BASIC COST ADJUSTED:		\$662

HAZARDOUS MATERIALS REMOVAL COST ESTIMATE

PROJECT:	SEAL PLANT	PROJECT NO:	5766
LOCATION:	St George Island, Alaska	CLIENT:	NOAA
ESTIMATED BY:	Brian Morgan	DATE:	04/04/03

OTHER COSTS:

INSURANCE	3.1 PCT	\$0
BONDING	3.0 PCT	\$0
OFFICE OVERHEAD	10.0 PCT	\$66
PROFIT	10.0 PCT	\$66
TOTAL OTHER COSTS:		\$132

TOTAL ESTIMATED REMOVAL & DISPOSAL COST :	\$794
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The cost for removal of asbestos containing materials (ACM) from this building were arrived at using the following assumptions: No special trip will be made for this building; rather, this work will be accomplished when asbestos-workers are on the island for other work. The small amount of asbestos in this facility would not justify a special trip for its removal.

The following assumptions have been used in assigning a dollar amount to the asbestos subtotal:

- 1) 1 supervisor and 1 worker for the job.
- 2) No travel costs associated with the project.
- 3) Meal rate of \$55/day per individual for duration of project
- 4) asbestos waste allowed to be disposed of on St George or transferred to St Paul
- 5) If NOAA decides to demolish this structure, a complete survey of the remainder of the structure will be required.

Estimate of costs for removal of miscellaneous hazardous items from two buildings on St George Island

Material	unit	Cost	Cottage C		Seal Plant	
			Quantity	extended price	Quantity	extended price
PCB ballasts	EA	\$40	27	\$1,080	0	\$0
Mercury bulbs	EA	\$2.50	60	\$150	65	\$163
mercury thermostat	EA	\$75	2	\$150	0	\$0
error lites w/batteries	EA	\$30	4	\$120	0	\$0

Subtotal/ *** \$1,500 \$163

*** Removal/disposal costs for miscellaneous items includes all costs for removal/disposal (assuming personnel are already on site for asbestos removal).



Photo 1: Seal Plant Building



Photo 2: White Sink Undercoating (5% Chrysotile)

HAZARDOUS MATERIALS SURVEY

**For
NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION
PRIBILOF FACILITIES
ST. GEORGE, ALASKA**



COTTAGE C BUILDING

**FINAL REPORT
November 2003**

Prepared by:

PSI
ENVIRONMENTAL &
INSTRUMENTATION
1611 East 1st Avenue
Anchorage, Alaska 99501

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Table 1: **ASBESTOS SAMPLE SUMMARY TABLE**

APPENDIX A: **FIELD AND LABORATORY DATA SHEETS**
APPENDIX B: **SAMPLE LOCATION FIGURES**
APPENDIX C: **COST ESTIMATE SUMMARY**
APPENDIX D: **PHOTO LOG**

ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Materials
CFR	Code of Federal Regulations
EHS	EHS Alaska, Inc.
EPA	Environmental Protection Agency
IATL	International Asbestos Testing Laboratories
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NMFS	National Marine Fisheries Service
NOAA	National Oceanic & Atmospheric Administration
NRC	Nuclear Regulatory Commission
NVLAP	National Voluntary Laboratory Accredited Program
OSHA	Occupational Safety and Health Administration
PCB	Poly-chlorinated Biphenyls
PLM	Polarized Light Microscopy
PSI	PSI Environmental & Instrumentation
TCLP	Toxic Characteristics Leachate Procedure
TEM	Transmission Electron Microscopy
XRF	X-Ray Fluorescence

1.0 INTRODUCTION

PSI Environmental & Instrumentation (PSI) was contracted by the National Oceanic & Atmospheric Administration (NOAA) to perform hazardous material surveys of several buildings on St. Paul and St George Islands, Alaska. Buildings on St. George Island include National Marine Fisheries Service (NMFS) Cottage C and the NMFS Wash Plant above the Sealing Plant. This report summarizes the survey performed at Cottage C. According to current occupants of the residence the structure was originally the island hospital and was constructed in 1927.. Samples were collected during the survey to fulfill the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) for future renovation or demolition work. Mick Neary of PSI, accompanied by Brian Morgan of EHS-Alaska, Inc. (EHS) performed an inspection and collected samples from building materials on March 24, 2003.

2.0 SCOPE OF WORK

Personnel inspected the building for the presence, extent, and condition of possible asbestos-containing materials (ACM), lead-based paint, leachable lead in building debris, mercury-containing items, polychlorinated biphenyls (PCB) ballasts in light fixtures and items containing radioactive compounds. The purpose of the inspection was to identify hazardous materials that may be disturbed during future renovation or demolition activities. Field and laboratory data sheets are included as Appendix A, building plans displaying sample locations are presented in Appendix B. A summary cost estimate has been prepared for the removal and disposal of identified hazardous wastes from this building, and is included as Appendix C. Appendix D contains a photo log from the survey.

3.0 SAMPLING AND ANALYSIS

3.1 Asbestos-Containing Materials

Personnel performed an inspection of the project building and collected samples of materials suspected of containing asbestos from 35 locations. Mr. Morgan is a U.S. Environmental Protection Agency (EPA) certified building inspector. All samples were analyzed for the presence of asbestos by polarized light microscopy (PLM), the method of analysis recommended by the EPA to determine the composition of suspected asbestos-containing materials. International Asbestos Testing Laboratories (IATL), Mt. Laurel, New Jersey analyzed samples for asbestos content. IATL is a National Voluntary Laboratory Accreditation Program (NVLAP) accredited laboratory. Only materials containing more than 1% total asbestos were classified as "asbestos-containing" based on EPA criteria. Table 1 provides a summary list of all samples collected with analytical results. Chain of Custody Record/Field Survey Data sheets and Laboratory reports are included in Appendix A. A floor plan showing locations of samples collected is provided in Appendix B.

**TABLE 1: ASBESTOS SAMPLE SUMMARY
SAMPLES COLLECTED MARCH 24, 2003**

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
SGC324-A01	Boiler gasket	Basement mechanical room	None Detected
SGC324-A02	12" x 12" glue on ceiling tile with 1" fissures and dots (GCT-1)	Room B1, center of room	None Detected
SGC324-A03	Brown GCT mastic	Room B1, center of room	None Detected
SGC324-A04	GCT-1	Room B1, W wall	None Detected
SGC324-A05	Brown GCT mastic	Room B1, W wall	Trace, < 1%
SGC324-A06	GCT-1	Room B1, N wall	None Detected
SGC324-A07	Aircell insulation	West of W stairwell in basement in small crawlspace	70% Chrysotile
SGC324-A08	Gypsum wallboard	S entryway ceiling	None Detected
SGC324-A09	Joint compound	S entryway ceiling	None Detected
SGC324-A10	Marble pattern green/brown sheet vinyl (SV-1)	Kitchen, top of stairs	SV – None Detected Mastic –None Detected
SGC324-A11	12 x 12 floor tile – looks like 6" parquet squares (FT-1)	Kitchen, NW corner	None Detected
SGC324-A12	Joint compound	Kitchen ceiling	Trace, < 1%
SGC324-A13	Pink sink undercoating	Kitchen, W wall	1.2% Chrysotile
SGC324-A14	Gypsum wallboard	Kitchen, NW corner	None Detected
SGC324-A15	Wire insulation	Sm hatch above S living room doorway	None Detected
SGC324-A16	Ceiling texture	Hall S of living room	None Detected
SGC324-A17	12 x 12 floor tile, with 4" white floral pattern (FT-2)	First floor bathroom, behind door	None Detected
SGC324-A18	Black cove base mastic	First floor bathroom, behind door	None Detected
SGC324-A19	Ceiling texture	Room 1, center	None Detected
SGC324-A20	Ceiling texture	Dining room, center	None Detected
SGC324-A21	SV-1	W wall of landing W of E stairwell	None Detected
SGC324-A22	FT-1	NE entryway	Tile - None Detected

TABLE 1: ASBESTOS SAMPLE SUMMARY
SAMPLES COLLECTED MARCH 24, 2003

SAMPLE NUMBER	MATERIAL	LOCATION	ASBESTOS CONTENT
			Mastic – None Detected
SGC324-A23	Gypsum wallboard	Ceiling of kitchen in first floor apartment	None Detected
SGC324-A24	FT-2	First floor apartment bathroom, N wall	Tile - None Detected Mastic – None Detected
SGC324-A25	Joint compound	E upstairs bedroom, NW corner	None Detected
SGC324-A26	Gypsum wallboard	S upstairs bedroom, N wall	None Detected
SGC324-A27	Wire insulation	Next to chimney in attic access hatch	None Detected
SGC324-A28	Tar paper	Beneath roof in crawl space in SW corner of upper floor	None Detected
SGC324-A29	Gypsum wallboard	Ceiling of W bedroom upstairs	None Detected
SGC324-A30	Window glazing compound	East upstairs bedroom, S window	None Detected
SGC324-A31	Window glazing compound	1 st floor, S side of building, center	None Detected
SGC324-A32	Window glazing compound	1 st floor, window on NE entryway	None Detected
SGC324-A33	Tarpaper	Wall under sink of upstairs bathroom	None Detected
SGC324-A34	Tarpaper	Wall under sink of upstairs bathroom	None Detected
SGC324-A35	Tarpaper	Upstairs, W bedroom, NW corner	None Detected

The testing method used (polarized light microscopy [PLM]) is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation should be made by quantitative transmission electron microscopy (TEM).

Sink Undercoating

The sprayed-on undercoating on the stainless steel sink in the kitchen was found to be asbestos containing. The material was in good condition and was considered non-friable.

Aircell Pipe Insulation

A small amount of Aircell pipe insulation was discovered in a small crawl space west of the western stairwell in the basement. The area was inaccessible and therefore the insulation was not removed during previous abatement efforts. It is possible that additional asbestos-containing pipe insulation is still inside plumbing walls. The material was in fair condition and is considered friable.

Settled and Concealed Dusts

Workers should be made aware that the potential exists for encountering dusts containing asbestos.

3.2 Lead-Containing Materials

Lead Paint

Paint was tested for lead at 46 locations throughout the building. Paint was analyzed using a NITON XL309 X-Ray Fluorescence (XRF) lead paint analyzer (Serial # U862NR0666 with software version 5.3). The instrument was operated in the "K & L + Spectra" mode. Prior to testing an instrument self-calibration test was performed and the instrument calibration was checked using a set of government traceable lead paint samples. Calibration was checked using known paint film samples containing 0.0 mg/cm², 0.3 +/- 0.1 mg/cm², 1.0 +/- 0.1 mg/cm², 1.6 +/- 0.2 mg/cm², and 3.5 +/- 0.3 mg/cm² of lead. The instrument was calibrated and all calibration tests were successful. Calibration tests are indicated in the test results table with the word "calibration" in the room column. Sampling results are included in Appendix A. A drawing showing sample locations is included in Appendix B.

The EPA has determined that paints containing lead greater than 1 milligram per square centimeter (mg/cm²) are considered "lead based paints". A single painted surface was found to have paint with lead in excess of the 1.0 mg/cm² threshold. Ceramic wall tile in common restrooms also exceeded the threshold but are not painted.

Although there is no requirement to remove lead-based or lead-containing paints from this building, any loose or peeling paint should be removed to prevent potential lead dust exposure to construction personnel during demolition. Additionally, wherever torch cutting or welding are to take place, paint should be removed from the heat-affected area.

The U.S. Occupational Safety and Health Administration (OSHA) does not recognize a lower limit to the quantity of lead present in paint for their standard, 29 CFR 1926.62, to be in effect. However, lead in paint at the levels found can expose construction/demolition workers to lead levels in excess of the permissible exposure limits set by the OSHA standard if proper work controls and protective equipment are not used during renovation.

Solder on Piping and Tubing

Depending on the age of the piping and tubing, soldered joints typically contain metallic lead.

Settled and Concealed Dusts

Workers should be made aware that the potential exists for encountering dusts containing lead.

Leachable Lead

Personnel performed a survey of the building and collected a composite sample of representative materials for leachable lead analysis. Sampling was performed using the guidelines set forth in the United States Army Environmental Hygiene Agency's *Sampling Protocol – Building Demolition Debris and Buildings Painted with Lead-Based Paint*. This composite sample was analyzed for leachable lead content by means of Toxicity Characteristic Leaching Procedure (TCLP). The composite sample was analyzed by EMSL Analytical, Westmont, New Jersey. The result of this composite sample analysis shows a concentration of 9.3 mg/L of lead, well below the allowable 5 mg/L as established by the EPA. This result indicates that the waste stream of this building would be considered hazardous waste with respect to lead. The Chain of Custody Record/Field Survey Data sheets with results are included in Appendix A.

3.3 Polychlorinated Biphenyls (PCB)-Containing Materials

Fluorescent light fixtures were inspected at random for the presence of polychlorinated biphenyl (PCB) containing ballasts. Unless ballasts were specifically labeled "No PCBs", they were assumed to contain PCBs. Approximately 27 PCB-containing ballasts were identified.

3.4 Mercury-Containing Materials

Fluorescent light fixtures were present throughout the project area. Due to their age, all fluorescent lamps were assumed to contain mercury. Prior to disposal, these should be analyzed for leachable mercury content by means of a TCLP procedure. This test will determine whether they are suitable for disposal in a landfill or whether they should be treated as hazardous waste when disposed of. There were approximately 60 of these bulbs in the facility.

Additionally, there were two thermostats that contained small ampules of mercury in the facility.

4.0 REGULATORY CONSTRAINTS

4.1 Asbestos-Containing Materials

The EPA regulations issued as Title 40 of the Code of Federal Regulations, Part 61 (40 CFR 61) under the National Emission Standards for Hazardous Air Pollutants (NESHAP), established procedures for handling ACM during asbestos removal and waste disposal. These regulations require an owner (or the owner's contractor) to notify the EPA of asbestos removal operations

and to establish responsibility for the removal, transportation, and disposal of asbestos. The disposal of asbestos waste is regulated by the EPA, the State of Alaska Department of Environmental Conservation, and the disposal site operator. OSHA regulation 29 CFR 1926.1101 requires air monitoring during ACM removal and during demolition to determine the airborne concentrations of asbestos to which workers may be exposed. 29 CFR 1926.1101 also establishes permissible exposure limits, respiratory protection and protective clothing requirements, and establishes standard work practices and engineering controls for asbestos removal. All federal, state and local standards regulating asbestos should be followed during renovations of this building.

4.2 Lead-Containing Materials

Federal OSHA requirements (29 CFR 1926.62), and the Alaska Administrative Code (AAC) (8 AAC Chapter 61) have promulgated or adopted regulations that apply to all construction work where employees may be exposed to lead. Due to the presence of lead-containing paint in and on the surfaces to be renovated, the renovation contractor is required to monitor his/her workers to determine if they will be exposed to lead at or above the action level established in the regulation. Until this "initial determination" establishes that workers are not exposed above the permissible exposure limit, the contractor is required to provide worker and site protection procedures. Continued air and medical monitoring may be required if exposure is above the action level.

The EPA requires that actual construction or demolition debris that contains lead or lead-containing paint be tested using the TCLP procedure to determine if the waste must be treated as hazardous waste. In order to classify the lead wastes as hazardous or non-hazardous for disposal purposes, TCLP tests are required by the EPA. The TCLP test determines the leachability of lead from the paint and substrate. Currently, the allowable leachate of lead in order to be classified as a non-hazardous waste is 5 milligrams of lead per liter of leachate (mg/l) or less. Anything above this 5 mg/l level is classified as hazardous waste and must be disposed of in the "lower 48" at an approved permitted Transportation, Storage, Disposal facility. All federal, state and local standards regulating lead and lead-containing wastes should be followed during the demolition of this building.

4.3 PCB-Containing Materials

Products that contain PCBs at 50 ppm or greater are regulated by the EPA. The EPA has promulgated regulations (40 CFR Part 761) that cover the proper handling and disposal of PCB-containing materials. Workers who remove or handle PCB-containing or PCB-contaminated materials or who transport or dispose of PCB wastes must be trained and certified in hazardous waste operations and emergency response (HAZWOPER) as required by 29 CFR 1910.120 and the State of Alaska Department of Labor (8 AAC 61). The Department of Transportation under 49 CFR Parts 100-199 regulates the marking, packaging, handling and transportation of hazardous materials. All federal, state and local standards regulating PCBs should be followed during the demolition of this building.

4.4 Mercury-Containing Materials

Building waste materials containing mercury or mercury compounds are considered hazardous waste if the mercury levels, as determined by a TCLP test of the waste, exceed 0.2 milligrams

per liter (0.2 mg/l). The EPA has promulgated regulations (40 CFR Parts 261, 262, and 263) that cover the proper characterization, handling, transportation and disposal of hazardous waste. Workers who remove or handle hazardous waste and transport or dispose of hazardous wastes must be trained and certified in HAZWOPER as required 29 CFR 1910.120 and the State of Alaska Department of Labor (8 AAC 61). The Department of Transportation under 49 CFR Parts 100-199 regulates the marking, packaging, handling and transportation of hazardous materials. All federal, state and local standards regulating mercury should be followed during the renovation of this building.

APPENDIX A

Bulk Asbestos and TCLP Field Data Sheets, Laboratory Reports and XRF Data

APPENDIX B

Sketches of Sample Locations

APPENDIX C

Abatement Cost Summary

APPENDIX D

PHOTO LOG

APPENDIX A

Bulk Asbestos and TCLP Field Data Sheets, Laboratory Reports and XRF Data

Lead Paint Screening Cottage C

No	Site	Inspector	Room	Structure	Substrate	Feature	Condition	Color	Ssec	Date/Time	Depth Index	Results	
												LBP	mg/cm ²
1	Cottage C	Morgan	Shutter Cal	1					73	3/24/2003 12:08	0	..	NA
2	Cottage C	Morgan	Calibrate						3.2	3/24/2003 12:09	1	NEG	0
3	Cottage C	Morgan	Calibrate						3.1	3/24/2003 12:09	1	NEG	0.29
4	Cottage C	Morgan	Calibrate						20.4	3/24/2003 12:09	1	POS	0.98
5	Cottage C	Morgan	Calibrate						9.4	3/24/2003 12:10	1.1	POS	1.7
6	Cottage C	Morgan	Calibrate						4.9	3/24/2003 12:11	1.1	POS	3.52
7	Cottage C	Morgan	Room	Wall	Concrte		Intact	Blue	22	3/24/2003 12:15	1	NEG	0.01
8	Cottage C	Morgan	Room	Wall	Wood		Intact	Blue	3.2	3/24/2003 12:16	1	NEG	0
9	Cottage C	Morgan	Room	Wall	Wood		Intact	Grey	3.2	3/24/2003 12:17	2.1	NEG	0.03
10	Cottage C	Morgan	Room	Wall	Concrte		Intact	Green	21.9	3/24/2003 12:17	1.1	NEG	0.04
11	Cottage C	Morgan	Room	Wall	Concrte		Intact	White	22	3/24/2003 12:19	2.1	NEG	0.01
12	Cottage C	Morgan	Room	Wall	Concrte		Intact	Grey	15	3/24/2003 12:20	1	NEG	-0.43
13	Cottage C	Morgan	Room	Stairs	Wood	Tread	Intact	White	3.2	3/24/2003 12:21	2	NEG	0.02
14	Cottage C	Morgan	Room	Wall	Wood		Intact	Brown	3.2	3/24/2003 12:22	10	POS	19.46
15	Cottage C	Morgan	Room	Window	Wood	Stool	Fair	Brown	5.5	3/24/2003 12:22	10	POS	10.22
16	Cottage C	Morgan	Room	Door	Wood	Casing	Fair	Brown	3.1	3/24/2003 12:23	1	NEG	0
17	Cottage C	Morgan	Room	Door	Wood	Door	Intact	White	3.2	3/24/2003 12:23	1	NEG	0
18	Cottage C	Morgan	Room	Wall	Drywall		Intact	Tan	5.5	3/24/2003 12:24	2.8	POS	15
19	Cottage C	Morgan	Room	Cabinet	Drywall	Door Out	Intact	Yellow	5.5	3/24/2003 12:24	1.4	NEG	0.13
20	Cottage C	Morgan	Room	Window	Wood	Stool	Intact	White	5.6	3/24/2003 12:25	6.3	POS	12.45
21	Cottage C	Morgan	Room	Wall	Drywall		Intact	Tan	3.3	3/24/2003 12:26	6	POS	11.78
22	Cottage C	Morgan	Room	Wall	Drywall		Intact	Tan	3.3	3/24/2003 12:28	7.1	POS	13.32
23	Cottage C	Morgan	Room	Wall	Drywall		Intact	Tan	3.2	3/24/2003 12:28	10	POS	14.37
24	Cottage C	Morgan	Room	Wall	Drywall		Intact	White	5.6	3/24/2003 12:29	1	NEG	0.03
25	Cottage C	Morgan	Room	Ceiling	Drywall		Intact	White	3.3	3/24/2003 12:29	2.5	POS	12.97
26	Cottage C	Morgan	Room	Door	Wood	Door	Intact	White	3.2	3/24/2003 12:30	1.5	NEG	0.07
27	Cottage C	Morgan	Room	Door	Wood	Casing	Intact	White	5.5	3/24/2003 12:31	1.3	NEG	0.05
28	Cottage C	Morgan	Room	Door	Wood	Casing	Fair	White	5.5	3/24/2003 12:32	1	NEG	0.1
29	Cottage C	Morgan	Room	Wall	Drywall		Intact	Yellow	7.9	3/24/2003 12:33	2.2	NEG	0.19
30	Cottage C	Morgan	Room	Wall	Drywall		Intact	Tan	3.2	3/24/2003 12:34	1	NEG	0.08
31	Cottage C	Morgan	Room	Wall	Drywall		Intact	Brown	14.9	3/24/2003 12:34	2.4	NEG	-0.37
32	Cottage C	Morgan	Room	Stairs	Wood	Tread	Intact	Brown	3.2	3/24/2003 12:35	1	NEG	0.11
33	Cottage C	Morgan	Room	Floor	Wood		Intact	Grey	11.6	3/24/2003 12:36	2.1	POS	1.77
34	Cottage C	Morgan	Room	Unlisted	Metal		Intact	Grey	4.5	3/24/2003 12:37	1	NEG	0.02
35	Cottage C	Morgan	Room	Window	Wood	Stool	Intact	Brown	5.4	3/24/2003 12:38	1.5	NEG	0.13
36	Cottage C	Morgan	Room	Ceiling	Drywall		Intact	Tan	3.1	3/24/2003 12:39	3.5	POS	14.77
37	Cottage C	Morgan	Room	Ceiling	Drywall		Intact	Tan	7.8	3/24/2003 12:39	6.9	POS	5.48
38	Cottage C	Morgan	Room	Wall	Drywall		Intact	Tan	3.2	3/24/2003 12:40	8.3	POS	20.74
39	Cottage C	Morgan	Room	Floor	Wood		Intact	Grey	9.5	3/24/2003 12:40	2.6	POS	2.32

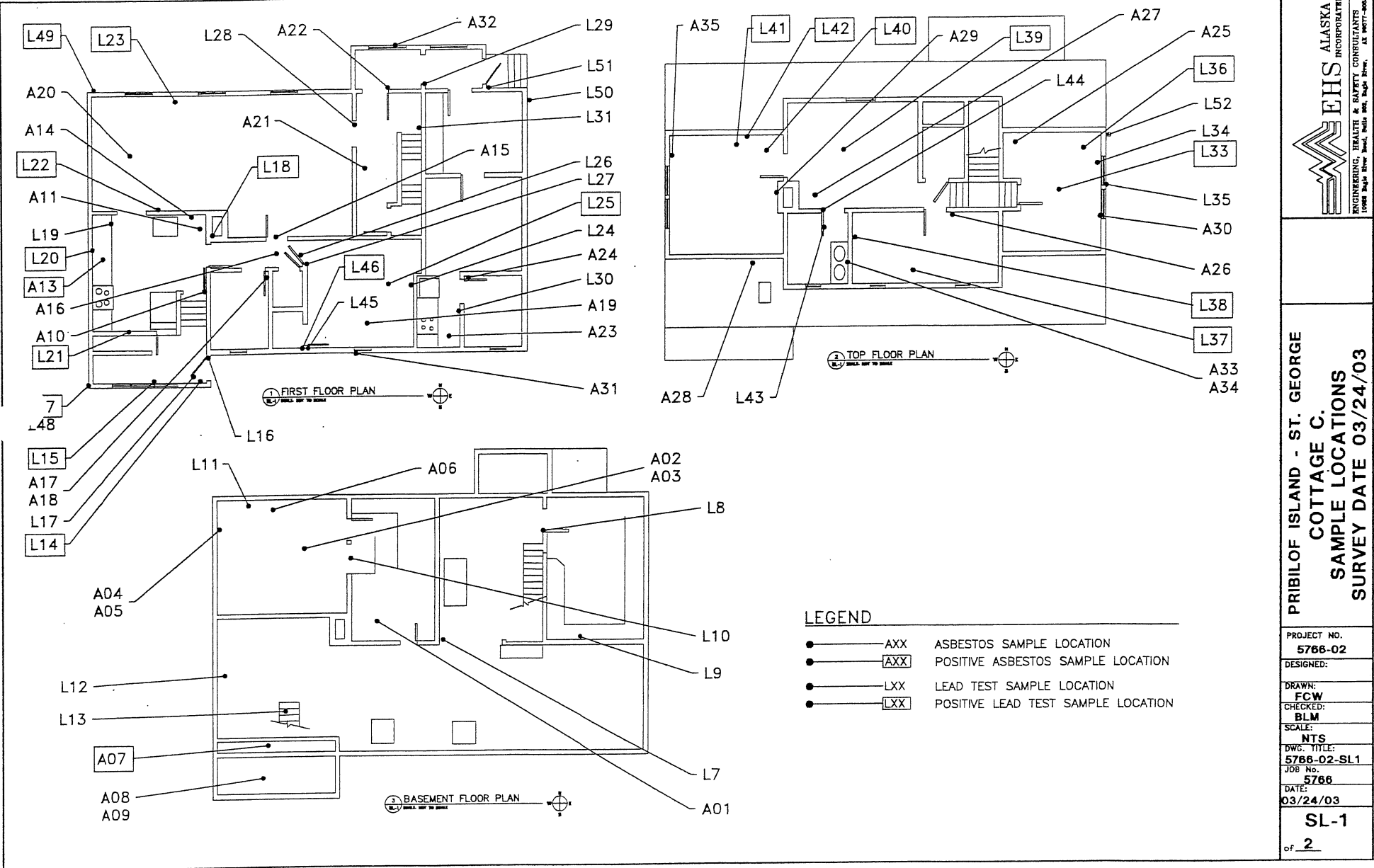
No	Site	Inspector	Room	Structure	Substrate	Feature	Condition	Color	Ssec	Date/Time	Depth Index	Results LBP	Results mg/cm ²
40	Cottage C	Morgan	Room	Floor	Wood		Intact	Grey	9.3	3/24/2003 12:41	1.7	POS	1.77
41	Cottage C	Morgan	Room	Ceiling	Drywall		Intact	Tan	5.5	3/24/2003 12:42	6.2	POS	6.92
42	Cottage C	Morgan	Room	Wall	Drywall		Intact	Tan	7.7	3/24/2003 12:42	5.8	POS	4.51
43	Cottage C	Morgan	Room	Door	Wood	Door	Intact	Brown	3.2	3/24/2003 12:43	1	NEG	0.07
44	Cottage C	Morgan	Room	Door	Wood	Casing	Intact	Brown	3.2	3/24/2003 12:43	1	NEG	0.09
45	Cottage C	Morgan	Room	Wall	Concrte		Fair	White	28.2	3/24/2003 12:45	2.3	NEG	0.28
46	Cottage C	Morgan	Room	Wall	Concrte		Fair	Green	9.6	3/24/2003 12:46	1.3	POS	2.2
47	Cottage C	Morgan	Room	Wall	Concrte		Fair	Green	3	3/24/2003 12:47	1	POS	1.88
48	Cottage C	Morgan	Room	Wall	Concrte		Fair	White	23.8	3/24/2003 12:47	3.1	NEG	0.3
49	Cottage C	Morgan	Room	Wall	Concrte		Fair	Green	5.1	3/24/2003 12:48	1.2	POS	2.35
50	Cottage C	Morgan	Room	Wall	Concrte		Fair	White	7.7	3/24/2003 12:49	1.4	INCOM	0.74
51	Cottage C	Morgan	Outside	0 Ext Wall	Wood	Trim Lwr	Poor	White	9.9	3/24/2003 12:51	2.1	NEG	0.35
52	Cottage C	Morgan	Outside	0 Wall	Wood		Poor	White	5.1	3/24/2003 12:52	2.9	POS	18.47
53	Cottage C	Morgan	Calibrate						3.1	3/24/2003 13:28	1	NEG	0
54	Cottage C	Morgan	Calibrate						20.3	3/24/2003 13:28	1.1	POS	1.1
55	Cottage C	Morgan	Calibrate						9.4	3/24/2003 13:29	1.1	POS	1.84

Table Heading Descriptions:

Ssec:	This is the nominal time in seconds that each sample was analyzed.
Depth Index:	Indicates the relative depth of the lead. A Depth Index (DI) of less than 1.5 indicates lead very near the surface layer of paint. A DI between 1.5 and 4.0 indicates moderately covered lead. A DI greater than 4.0 indicates the lead paint is deeply buried beneath multiple layers of paint.
LBP:	Results are shown as positive (POS ≥ 1.0 mg/cm ²), inconclusive (INC) or negative (NEG < 1.0 mg/cm ²). The results are based on the combined results of the K and L shell readings. L shell and K shell readings are not provided. Positive results are also in bold print.
mg/cm ² :	This is the testing results produced by the NITON XL-309 instrument in milligrams of lead per square centimeter (mg/cm ²). The EPA defines lead based paint as paint containing lead at 1.0 mg/cm ² or greater. A negative number is a result of an internal computation made by the instrument and should be interpreted as zero. Even though paint may be termed negative (less than 1.0 mg/cm) by EPA definition, disturbance of the paint may still be regulated by OSHA under 29 CFR 1926.62. Where lead is present at any level, appropriate engineering controls, work practices and personal protective equipment should be used until a negative exposure assessment can be determined.
VOID:	This indicates that the test was intentionally terminated by the operator due to operator error (e.g. - operator moved analyzer while testing).

APPENDIX B

Sketches of Sample Locations



PRIBILOF ISLAND - ST. GEORGE
COTTAGE C.
SAMPLE LOCATIONS
SURVEY DATE 03/24/03

PROJECT NO.	5766-02
DESIGNED:	
DRAWN:	FCW
CHECKED:	BLM
SCALE:	NTS
DWG. TITLE:	5766-02-SL1
JOB No.	5766
DATE:	03/24/03
	SL-1
of	2

HAZARDOUS MATERIALS REMOVAL COST SUMMARY				
PROJECT:		COTTAGE C		
LOCATION:		St George Island, Alaska		
BASIC HAZARDOUS MATERIAL REMOVAL COSTS (Includes Labor):				
ASBESTOS CONTAINING MATERIAL REMOVAL (Sink Undercoating and visiblv pipe Insulation)			\$475	
OTHER HAZARDOUS MATERIALS REMOVAL (PCB Ballasts, Mercury Bulbs & Thermostats, Emergency Lts w/ batteries)			\$1,500	
TOTAL REMOVAL COSTS:			\$1,975	
BASIC SUPPORT COSTS:				
	QTY	UNIT	COST PER UNIT	TOTAL COST
PROJECT DESIGNER FEE:	1	EA @	\$500 LUMP	\$500
MEALS (2 pers) FOR MOB/DEMOB DAYS	1	DAYS @	\$110 DAY	\$110
MEALS (2 pers) DURING PROJECT WORK:	1	DAYS @	\$110 DAY	\$110
RT AIRFARE TO SITE (3 pers.):	3	EA @	\$900 TICKET	\$2,700
TRAVEL DAY LABOR COSTS (2 pers.crew)	1	DAYS @	\$640 DAY	\$640
AIR MONITORING PERSON:	1	DAYS @	\$425 DAY	\$425
TRAVEL DAY LABOR COST (air mon. pers.)	1	DAYS @	\$425 DAY	\$425
SHIPPING OF SUPPLIES (to St Paul)	1	LOT @	\$1,500 LUMP	\$1,500
TOTAL SUPPORT COSTS:				\$6,410
TOTAL BASIC COSTS:		(REMOVAL & SUPPORT)		\$8,385
LOCATION ADJUSTMENT:		INDEX = @ 1.10		\$9,224
CONTINGENCY:		PERCENT= @ 5		\$461
TOTAL BASIC COST ADJUSTED:				\$9,685
OTHER COSTS:				
INSURANCE	3.1	PCT		\$300
BONDING	3.0	PCT		\$300
OFFICE OVERHEAD	10.0	PCT		\$1,000
PROFIT	10.0	PCT		\$1,000
TOTAL OTHER COSTS:				\$2,600
TOTAL ESTIMATED SITE PROJECT COST :				\$12,285

NOTE: This is not a formal cost proposal. These costs are approximate, are based on general industry standards, and are based on information collected during the surveys, as well as information available at the time of preparation of this estimate. The removal costs will vary greatly depending on a number of factors, including the amount of material removed from each area (smaller amounts are not as cost efficient), whether one building or all three are done simultaneously, whether or not the local landfill is permitted to accept asbestos waste (etc.). The small quantity of asbestos at this location suggests that abatement activities be performed in conjunction with other asbestos abatement activities if possible.

The following assumptions have been used in assigning a dollar amount to the asbestos removal subtotal:

- 1) 1 supervisor and 1 worker for each building; plus one air monitoring person
- 2) One day travel each way to and from site for each person
- 3) 1 full work day to complete abatement
- 4) Government to provide lodging for all personnel
- 5) Meal rate of \$55/day per individual for duration of project
- 6) Asbestos waste will be disposed of on St George Island



Photo 1: Cottage C Building



Photo 2: Aircell Insulation West of W stairwell in basement crawl space

